

With regard to energy efficiency and mortgage risks, the paucity of information is surprising because the potential relationship between the two can be easily explained. Burt, Goldstein and Leeds (2010) theorize that mortgages on energy-efficient houses should have lower risks than those on standard houses because the savings from residential energy and transportation costs leave more income available in case of emergencies or unexpected events. Using proxy measures for transportation energy costs such as Walk Score™, Rauterkus, Thrall, and Hangen (2010) find that transportation energy savings are associated with lower mortgage delinquency risks in high-income areas but higher risks in low-income areas. Increased vehicle ownership for households, as a proxy for higher transportation costs, increases the delinquency risks. These results contradict the earlier study by Blackman and Krupnick (2001), who find that location efficient mortgages do not have any significant effect on delinquency risk compared to conventional mortgages.<sup>1</sup> Empirical studies on this and related issues have reached suggestive, inconclusive, and even contradictory findings in large part due to the reliance on proxy measures to capture important variables.

In this study, we address some of the limitations of prior work and examine whether residential energy efficiency is associated with lower mortgage risks. More narrowly, we use a national sample of 71,000 loans from CoreLogic (38 states and the District of Columbia) and examine whether energy efficiency and the degree of energy efficiency are associated with lower default and prepayment risks. In this particular study, we focus on household energy consumption, leaving the effect of transportation energy burden for future work.

The structure of the paper is as follows. We first describe the different financing mechanisms for residential energy efficiency. Next, we provide an overview of the

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<sup>1</sup> This study is limited to Federal Housing Administration (FHA) loans in Chicago, Ill. Because the mandate of FHA is to increase home ownership among poor people, the results from this study may not be generalizable.